

## REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow.

### **I. Status of the claims**

Claims 80, 85, 92 and 94-99 were previously canceled without disclaimer or prejudice thereof.

Claims 70, 87, 90 and 91 are currently being amended. Claim 70 is amended to omit reference to a “joint space” and to instead recite a “first space.” Claims 87, 90 and 91 are amended to omit reference to a “hollow space” and to instead recite a “first space.” The amendments add no new matter and support can be found throughout the specification, for example at paragraphs [0133], [0137] and Figure 1 of U.S. Publication No. 2005/0130317. Paragraph [0133] describes the first space as an “analytic space” which receives separation medium. Paragraph [0137] describes that samples migrate through the separation medium in the first space. Figure 1 shows the first space (2) as a hollow, 3-dimensional space (*see also* paragraph [0132], describing the first space of Figure 1 as a hollow space for receiving separation medium).

Applicants acknowledge that these amendments are made after a final action on the merits. However, because the amendments do not introduce new matter and place the claims in condition for allowance or at least in better condition for appeal, entry and examination thereof is respectfully requested.

This amendment adds, changes and/or deletes claims in this application. A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim(s) remain under examination in the application, is presented, with an appropriate defined status identifier. After amending the claims as set forth above, claims 70-79, 82-84, 87-91 and 93 are now pending in this application.

## **II. Claim rejection – 35 U.S.C. § 102**

### **A. Hayashizaki et al.**

Claims 70-72, 74-79, 81-84, 87-91 and 93 are rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 6,120,667 (Hayashizaki) for the reasons set forth in the Office Action dated 10-1-08. Applicants respectfully traverse this ground for rejection.

Specifically, the Office Action asserts that Hayashizaki discloses “a device and method for simultaneous separation of biological samples such as protein or DNA by electrophoresis.” (Office Action dated 10-1-08 at page 2). The Office Action continues, stating that the Hayashizaki device includes “a first space (holder -4) with passages for capillaries (2) having separation media and a well plate (66) having an array of wells.” (Id.) The Office Action dated 5-13-09 asserts that “[d]uring use, the capillaries are placed into wells that contain a sample. Upon application of voltage, the sample moves upward into the capillary where the sample undergoes separation” (Office Action dated 5-13-09 at page 5). The Office Action dated 5-13-09 asserts that the “first space” of Hayashizaki (the capillaries) is different than the “joint space” of Hayashizaki (capillaries and the sample well space). (Office Action dated 5-13-09 at page 4-5). The Office Action asserts that the method and device of Hayashizaki anticipates the present claims, because the “joint space” recited in the present claims could allegedly be construed to comprise a capillary (*e.g.*, as a first space) and a sample well. (Office Action dated 5-13-09 at page 5). Applicants respectfully disagree with the Examiner’s analysis and conclusion.

As summarized by the Examiner, Hayashizaki describes a method and device for the simultaneous separation of samples, wherein each sample is separated within a first space (the capillaries). The capillaries are part of the joint space, which also includes the sample wells.

The claims have been amended to omit reference to a “joint space,” and to instead recite a “first space.” As detailed in claims 70 and 87, the present claims describe methods and devices for the simultaneous parallel separation and detection of a multiplicity of samples within a first

space. A separation medium essentially fills the first space entirely and extends across all three space coordinates. Thus, the separation medium within the first space is permeable in any direction and samples that migrate through the separation medium of the first space and are not constrained by compartments, such as capillaries. Such a configuration is supported by the specification, for example, at paragraphs [0132], [0133] and [0137] of U.S. Publication No. 2005/0130317, describing the “first space” as a 3-dimensional, analytical space filled with a separation medium, and that the samples migrate through the medium contained within this first space.

Hayashizaki does not teach or suggest a first space without compartments, through which a plurality of samples migrate. Because Hayashizaki’s first space requires compartmentalized by capillaries, Hayashizaki does not anticipate the pending claims. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

**B. Wierzbowski et al.**

Claims 70-72, 74-79, 81-84, 87 and 89-91 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Publication No. 2002/0168643 (Wierzbowski) for reasons presented in the previous Office Action dated 10-1-08. Applicants respectfully traverse this ground for rejection.

Specifically, the Office Action asserts that Wierzbowski teaches a “device and methods for simultaneous separation of biological samples such as protein or DNA by electrophoresis,” and that “the device includes a first space (block -20) with wells (40) having separation media and a collection block (100) also having an array of wells (110). The device also includes electrode elements (30, 90) for directing flow.” (Office Action dated 10-1-08 at page 3). The Office Action continues, asserting that “Wierzbowski teaches the use of a membrane.” (Id.) The Office Action dated 5-13-09 states that “[i]n use, the samples are loaded through the top wells (92) and onto the top of the separation media contained in the sample wells (40) of the sample block (20).” (Office Action dated 5-13-09 at page 5). The Office Action asserts that “the sample

wells (40) of Wierzbowski provide a ‘first space’ that is filled with separation media,” and that the joint space of Wierzbowski includes the sample wells and “other areas that combine with the first space.” (Office Action dated 5-13-09 at page 6). Therefore, the Office Action concludes that the teachings of Wierzbowski anticipate the present claims (Id). Applicants respectfully disagree with the Examiner’s analysis and conclusion.

As explained above, the claims have been amended to omit reference to a “joint space” and instead recite a “first space.” The first space of the present claims is essentially entirely filled with separation medium which is permeable in any direction. The first space is not constrained by compartments, such as wells, and all samples migrate through, and are separated for analysis in the first space.

Wierzbowski does not teach or suggest a first space without compartments, such as wells, through which a plurality of samples migrate. Because Wierzbowski requires a compartmentalized first space, Wierzbowski does not anticipate the pending claims. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) is respectfully requested.

**C. Desrosiers et al.**

Claims 70-76, 78, 82-84, 87-91 and 93 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,410,332 (Desrosiers) for reasons presented in the Office Action dated 10-1-08. Applicants respectfully traverse this ground for rejection.

Specifically, the Office Action dated 10-1-08 asserts that “Desrosiers teaches a device and method for analysis of reactions” having “a reaction block (174) with an array of wells (176) and a cover (180) with spaces (192) for sorbent trap (194),” and “controlled heating elements...for heating the wells.” (Office Action dated 10-1-08 at page 3). The Office Action continues, asserting that methods for using the device include the steps of “trapping a component in the well, heating the component to release it from the well, and then collecting the component

in the sorbent trap in the cover.” (Id.) The Office Action dated 5-13-09 asserts that the sorbent traps (245) of Desrosiers provide a first space that is filled with separation media, and that Desrosiers anticipates the present claims because the “joint space” as recited in the claims could be construed to include “a reaction block having multiple spaces such as wells or traps.” (Office Action dated 5-13-09 at page 4). Applicants respectfully disagree with the Examiner’s analysis and conclusion.

As explained for both Hayashizaki and Wierzbowski, the claims have been amended to omit reference to a joint space and to recite a first space. The first space of the present claims is essentially entirely filled with a separation medium which is permeable in any direction. The first space is not constrained by compartments, such as wells or traps, and all samples migrate through and are separated together in the first space.

Desrosiers does not teach or suggest a first space without compartments, such as wells or traps, through which a plurality of samples migrates. Because Desrosiers requires a compartmentalized first space, Desrosiers does not anticipate the pending claims. Accordingly, reconsideration and withdrawal of the rejection under 35 U.S.C. § 102(e) is respectfully requested.

### **III. Conclusion**

The present application is now in condition for allowance. Favorable reconsideration of the application is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by the credit card payment instructions in EFS-Web being incorrect or absent, resulting in a rejected or

incorrect credit card transaction, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorize payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date

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